THE INSTITUTE SPOKESMAN

Volume XII • Number 2 • May, 1948

"PRECISION" "TEMP-TROL" CIRCULATING SYSTEM
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(Page 3)

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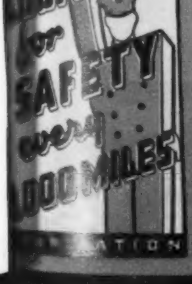

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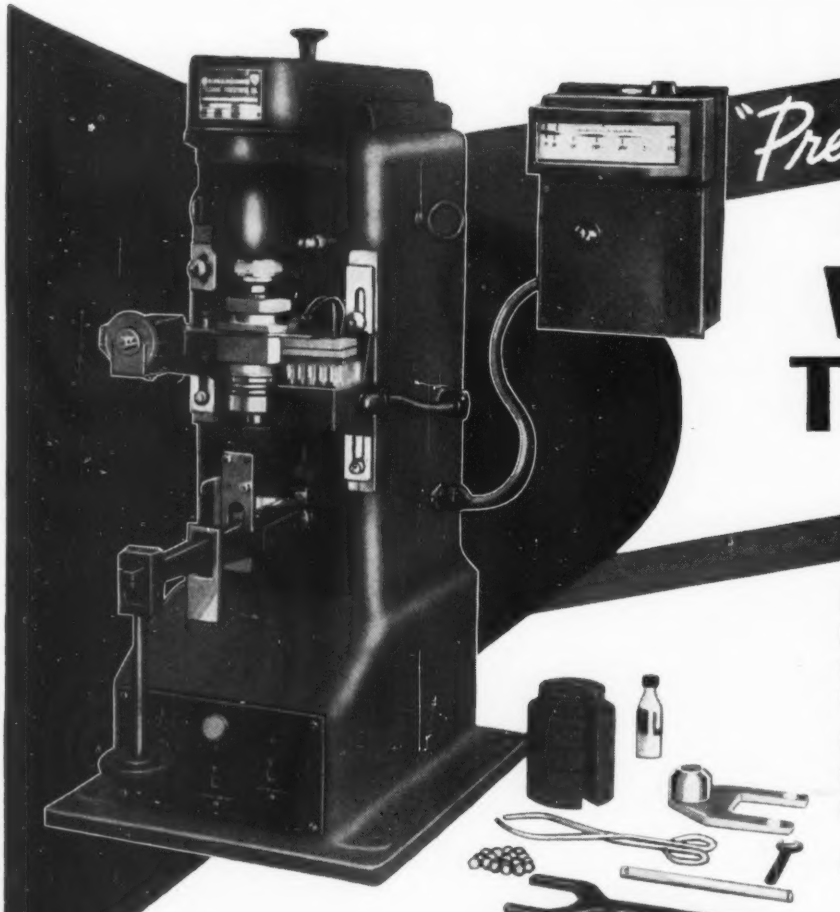

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ANOTHER NEW DIRECTOR TO BOARD

Dwight F. Benton Resigns and Is Succeeded by W. Wayne Albright

W. Wayne Albright, New Board Member

Mr. Dwight F. Benton has resigned his position as manager of the lubricating and sales technical service departments of Standard Oil (Indiana) to become president of Root Petroleum. His withdrawal from active participation on our Board was met with regret; his term of service to our industry will be recalled for his interest in all matters relevant to industry advancement. He is succeeded to the N. L. G. I. Board by W. Wayne Albright, who will fill his unexpired term extending to October, 1950.

Mr. Albright joined the Standard Oil Company (Indiana) in 1927 as a lubricating engineer at Detroit, Michigan. In 1932 he became a special salesman at Grand Rapids, Michigan, and an analyst in the sales research department of the general office at Chicago. He was a motor oil sales promoter in the general office when he returned to Detroit as a lubricating engineer in 1937. He came back to the general office as a lubricating engineer in 1944 and became assistant to the manager of the lubricating department in 1946. Promotion to assistant manager of the lubricating and sales technical service departments took place in 1948.

New Director Albright is hailed to our Board with the well wishes from all for a successful and happy term of service for our industry.

DEATH OF MRS. BERTHA KARNS

Wife of Board Member Succumbs at Pittsburgh, Pennsylvania

The Officers, Directors and Members of the N. L. G. I. join in offering their deep sympathy to Mr. C. B. Karns in the loss of his wife Monday night, May 3, 1948. Mrs. Karns was interred on the morning of May 6th at Meadville, Pennsylvania, their previous home before going to Pittsburgh, Pennsylvania. Mrs. Karns passed away following a protracted illness.

The INSTITUTE SPOKESMAN

Published monthly by
THE NATIONAL LUBRICATING GREASE INSTITUTE

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THE GREASE PHASE OF STEEL PLANT LUBRICATION

by C. E. Pritchard, Chief Lubrication Engineer, Republic Steel Corporation, Cleveland, Ohio.

Presented at the Fifteenth Annual National Lubricating Grease Institute Convention at the Edgewater Beach Hotel in Chicago, October 16-18, 1947.

Lubricating greases have played a steadily increasing role in maintaining maximum capacity of the various operating units that make up a steel plant. Inasmuch as heavy duty machinery, which entails considerable capital expenditure, is mandatory in the manufacture of steel and its allied products, it is readily understood that replacement and repair of these units must be held to an absolute minimum. Lubrication in its many ramifications plays a most important part in making this possible.

For purpose of simplification, the various divisions of a steel plant will be broken down as follows:

A. *Steel Producing*
   1. Blast Furnace and Coke Plant
      a. Hulett Unloaders
      b. Ore Bridges
      c. Pig Machine
      d. Conveyor Systems
      e. Coke Pushers, Larry Cars and Skips
   2. Open Hearths, Electric Furnaces, and Bessemer Converters
   3. Blooming, Bar, Plate, Rod, and Merchant Mills.

B. *Steel Finishing*
   1. Continuous Hot Strip Mills
   2. Continuous Cold Strip Mills
   3. Single Hot and Cold Sheet Mills
   4. Wire Mills, etc.

C. *Auxiliary Equipment*
   1. Locomotives, Steam and Diesel
   2. Locomotive Cranes, Steam and Diesel
   3. Trucks and Tractors
   4. Water Pumping Stations
   5. Steam Generating Stations.

Considerable difficulty has been encountered in regard to the pumpability characteristics of lubricating greases. In fact, the problem is as yet quite prevalent and should warrant further investigation. In order to overcome the inability to satisfactorily pump conventional greases through the feed lines of the semi-automatic and automatic lubricating systems during periods of low ambient temperature, it has been found necessary to resort to usage of a grease encompassing of a very light low pour test mineral oil. This is especially true of such operations as Hulett unloaders, ore bridges, blast elements at all times.

Fig. 1 illustrates a Hulett unloader. A total of seven individual lubricating systems are employed to cover approximately 300 points requiring lubrication. Very high operating pressures were encountered in the lubricating system with several cases of bursted tubing being reported prior to the usage of the grease mentioned above. Although this would seemingly be the answer to our problem, it is found in actuality to evolve a somewhat comparable problem in that whenever the ambient temperature tended to rise, the light oil involved did not provide a sufficient safety factor to sustain the high unit loading. It behooves the man responsible for the lubrication to exercise diligent care in making the necessary changes in the type of lubricant used to overcome this difficulty. The tendency on the part of the oil constituent of this

Figure 1
Hulett Unloader. ". . . 300 lubrication points"

low temperature lubricant to bleed out of the soap at the elevated temperatures while subjected to the heavy pressures also aggravates the situation immensely.

One alternative method sometimes resorted to in offsetting the problems noted wherein the light oil and soap combination has been employed is to trace all lead lines of the grease systems with thermostatically controlled electrical resistance type leaded cable. Subsequent lagging in turn minimizes the heat loss on an installation of this type. On the other hand, it would be economically unsound to consider the leaded cable except in remote instances.

Fig. 2 illustrates an ore bridge together with a section of belt conveyor. As you will note, the inaccessibility of the many points of lubrication on a unit of this

C. E. Pritchard

type together with high static loading of the bearings presents a problem somewhat similar to that noted on the unloader. Lubrication of the bridge and trolley necessitates the same seasonal changes in the type of grease as outlined in the previous discussion. A general purpose grease of the lime soap type incorporating an oil of [illegible] seconds saybolt universal, minimum, viscosity at 210° F. has probably been used most extensively to date. The desired consistency being dictated by prevailing atmospheric conditions. As a general statement, all conveyor bearings can be satisfactorily lubricated with the general purpose grease. Frequency of lubricant application for conveyor bearings has been set up on a quarterly basis and is performed by usage of a power operated grease gun to facilitate minimizing the time element involved. Changes in consistency of the grease commensurate with the prevailing ambient temperature are made during these quarterly periods.

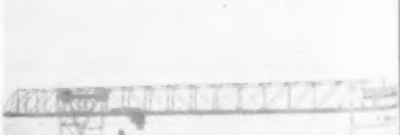

Figure 2
Ore Bridge and Belt Conveyor. ". . . inaccessibility . . . high static loading on bearings presents . . . problem"

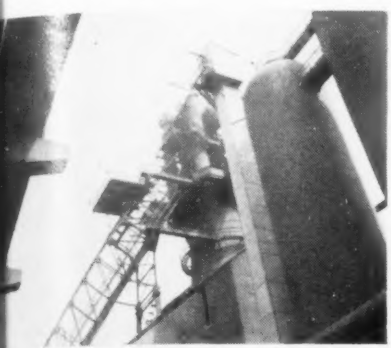

Figure 3
Blast Furnace. ". . . hand grease gun . . . automatic lubricating"

Fig. 3 illustrates a blast furnace. The skip car wheels are grease lubricated by means of a portable hand grease gun together with several auxiliary equipment bearings such as shaker screens, scale car, etc., located at the bottom of the incline. Automatic lubricating systems are generally employed to provide lubrication of the bell beams, distributor, sheaves and sealing of the large bell to prevent gas leakage, located at the furnace top.

Fig. 4 illustrates a semi-automatic lubricating system applying grease to the valve mechanism of a blast furnace gas line. Grease has proven to be quite superior to oil for this type of application due primarily to its better adhesive qualities. Several modifications of this system have become standard practice throughout the steel plant, replacing for the greater part the stick grease previously employed in lubricating the plug type valves with those of a plastic nature more readily

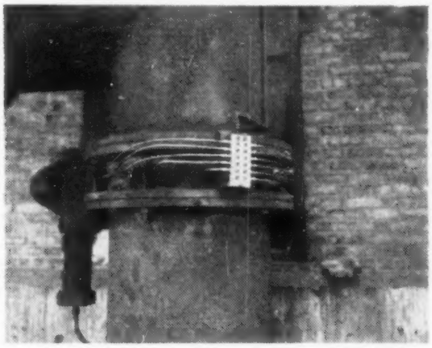

Figure 4
Semi-Automatic Lubricating System. ". . . grease proven superior . . . better adhesive qualities"

handled in the conventional dispensing equipment. Greases composed of lard oil and soda soap have successfully handled the higher temperature applications. Lead soap and carbon black combinations have also been employed for this purpose with gratifying results being noted therewith.

Fig. 5 illustrates a pig machine. You will note the operator applying grease to the bearings through the medium of a header line supplied in turn by an air operated barrel pump located in a room at the base of the conveyor proper. This operation entails several adverse conditions such as high temperature, extreme water wash in the proximity of the conveyor discharge, and dust contamination. Usage of a high melting point and water repellant grease for this service has been the most promising to date.

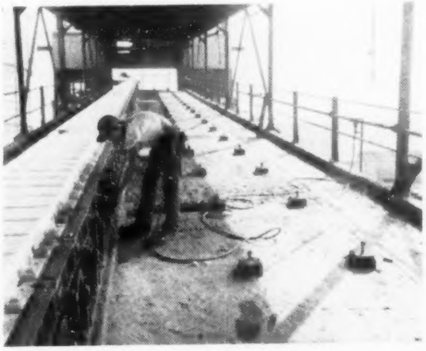

Figure 5
Pig Machine. ". . . high temperature . . . water wash . . . conveyor discharge . . . dust contamination"

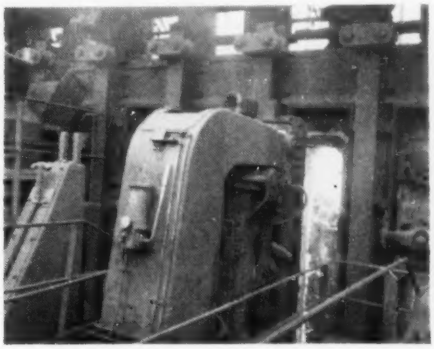

Figure 6
Door Extractor and Pusher Unit of Coke Battery. ". . . sealing and stability problem for lubricant"

Fig. 6 illustrates a door extractor and pusher unit of a coke battery. Intense heat and dust contamination during the period when the door has been removed and the coke charge pushed out of the ovens offer both a sealing and stability problem for the lubricant used. Grease is more or less universally used for this application with soda soap and heavy cylinder stock combinations predominating.

Fig. 7 illustrates an electric furnace. The semi-automatic lubricating system reservoir may be seen to the right of the door opening drive unit. The grease used in this case acting primarily as a sealant to prevent dust contamination along with

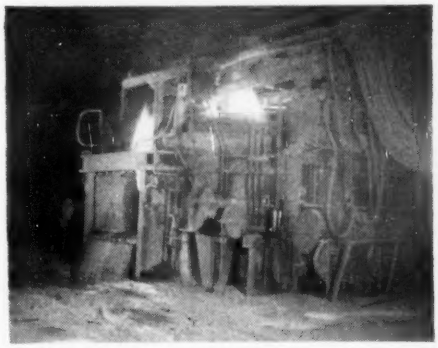

Figure 7
Electric Furnace. ". . . lubricating system with grease eliminated problem"

its normal lubricating function. Considerable difficulty had been previously experienced with the mechanism used to elevate and lower the electrodes due to

(Continued on following page)

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the lack of lubrication. Installation of the semi-automatic lubricating system with grease being applied at regular in-

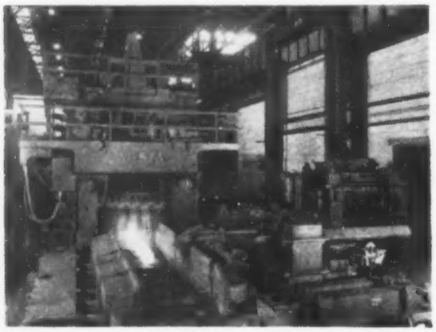

Figure 8
Blooming Mill. ". . . recommendation—extreme pressure grease"

tervals completely eliminated this problem. General purpose lime base grease of the heavy oil type has been used with complete satisfaction.

Fig. 8 illustrates a blooming mill. Most modern installations have incorporated anti-friction type bearings to support the table rolls; hence, the general recommendation of an extreme pressure grease to assist in meeting the heavy duty service and shock loads involved.

Figs. 9 *and* 10 illustrate a de-surfacing machine and crop shear respectively. You will note that the operating head of the de-surfacing machine is exposed to considerable heat radiation in addition to

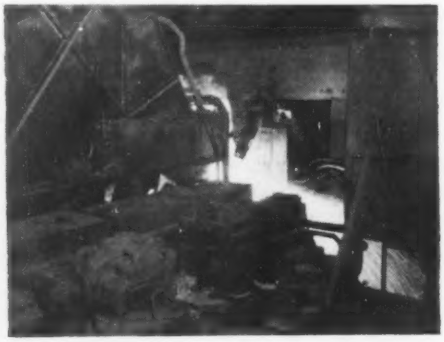

Figure 9
De-Surfacing Machine. ". . . soda soap grease effective sealant"

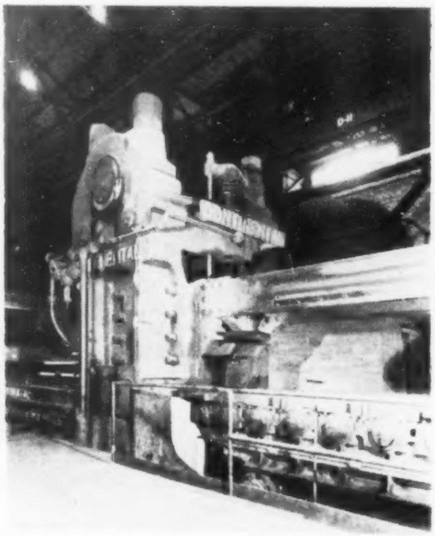

Figure 10
Crop Shear. ". . . lubrication similar to blooming mill tables"

contamination with fine scale and coolant water. Soda soap grease of the heavy cylinder oil type has proven quite satisfactory for this service while acting as a very effective sealant even in the presence of water. The plain bearing of the shear eccentric, gibs, and gauge table rolls are handled similar to the method used in the lubrication of the blooming mill tables.

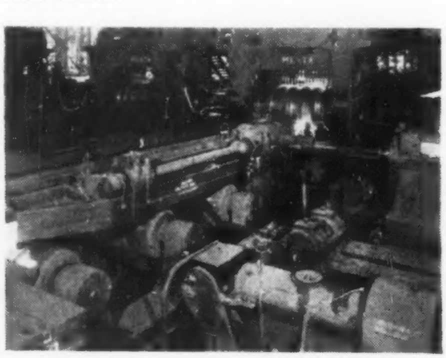

Figure 11
Cross Country Bar Mill. ". . . savings in man hours . . . bearings . . . down time"

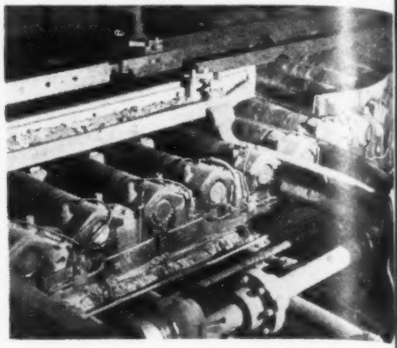

Figure 12
Tables of Older Blooming Mill. ". . . grease composed: soda-lime soap, cylinder oil and graphite . . . used summer and winter"

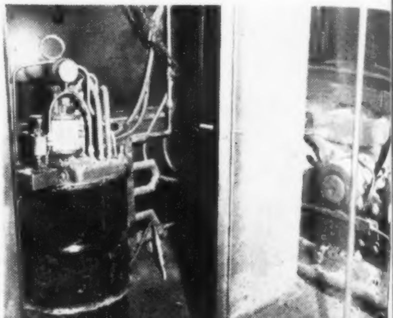

Figure 13

Fig. 11 illustrates a cross country ba mill. Although originally designed f

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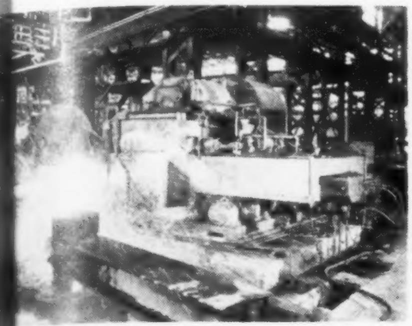

Figure 14
Hot Saw to Cut Billets. ". . . extreme pressure grease . . . no further bearing failures"

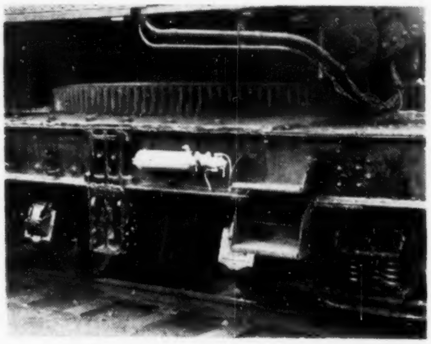

Figure 15
Old Style Locomotive Crane. ". . . converted from hand oil . . . to grease lubrication"

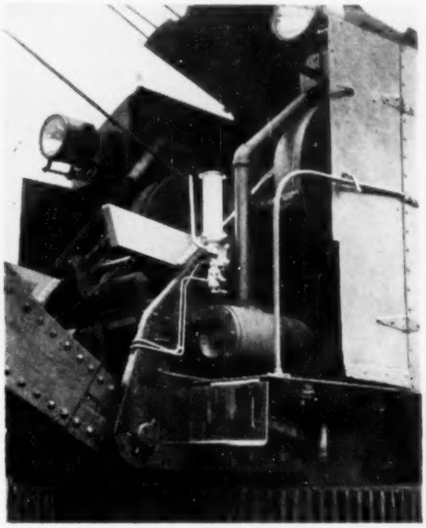

Figure 16

hand oiling, it will be noted that all points of lubrication have now been converted over to grease applied on a controlled time interval. Considerable savings in man hours and bearings coupled with less down time for maintenance has made possible a considerable increase in production of the mill as the result of these changes.

Figs. 12 *and* 13 illustrate a similar conversion from oil to grease lubrication on the tables of an older blooming mill. The barrel type dispensing unit being housed in a metal covering to minimize contamination of the lubricant and damage to the rubber hose due to hot flying scale. A grease composed of a soda-lime soap, heavy cylinder oil, and graphite has been employed for both summer and winter seasons. Steam pipe or electrical resistance type leaded cable tracers being necessary to facilitate pumping this heavy bodied lubricant during the periods when low ambient temperatures are encountered.

Fig. 14 illustrates a hot saw used to cut the billets to the required length. The rotary saw blade is suspended on a movable head. Several bearing failures were noted, presumably due to lack of sealing on the part of the lubricating oil with contamination of the bearing as a consequence, until an extreme pressure grease was applied. No further bearing failures being noted to date. The selection of the extreme pressure grease being predicated on the basis of the extremely heavy bearing loading noted when cutting the heavier sections.

Figs. 15 *and* 16 illustrate how an old style locomotive crane was converted from hand oil lubrication to grease lubrication. As an added experiment, composition bearings were installed as a replacement for the brass bearings used pre-

(Continued on following page)

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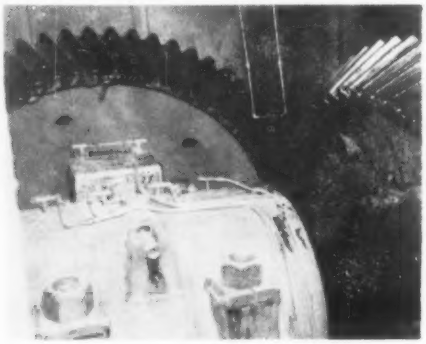

Figure 17
Bar Mill Line Shaft Bearing. ". . . no contamination . . . loss of gearshield"

viously. Very satisfactory service has been enjoyed with no bearing replacements being necessitated after two years of service operation. The lubricant involved being the same general purpose lime base grease in general use throughout the plant.

Fig. 17 illustrates a bar mill line shaft bearing which formerly employed oil for lubrication and which was subsequently converted to grease. As you will note, the gears involved are lubricated with gearshield. Previously, the oil would creep out on the shafting and gears causing a washing action which resulted in the total removal of the gearshield from the gear teeth. Since converting to grease lubrication on the bearings, no further contamination or loss of gearshield has been noted.

Although the foregoing illustrations do not cover all the operations of a steel plant, they are at least indicative of the trend on the part of the lubrication engineer to utilize grease as means of curtailing wastage of lubricant while affecting better lubrication practice, especially where the older operating units are involved.

Extreme pressure greases were first introduced as a means of providing a safety factor on heavily loaded roller bearings of the strip mill. The theory being that these so-called extreme pressure additives would impart to the grease certain given properties which would prevent incipient seizure and the resultant failure of the bearing during periods of abnormally high peak loading. Under these conditions of boundary lubrication, some minor scoring or wearing of the bearing surfaces takes place. Greases of this type are very similar to cup greases in their composition, but due to their being blended with higher viscosity oils, show a decided tendency to resist separating in service.

In an effort to provide standardization of lubricants with a minimum of products to handle it is only natural that the lubrication engineer of the steel plant would include the extreme pressure grease for numerous applications over and above that for which a product of this type was originally intended. In fact, it soon became quite apparent that this type of grease could be utilized as a general purpose application thereby minimizing the misapplications noted previously wherein several distinctly different products were on hand.

Of secondary importance only to the lubricating function of the grease is its ability to provide sealing to prevent entry of water and other foreign contaminants which would tend to hasten destruction of the bearing. In this respect, it is found that certain types of soap combinations have a distinct advantage over the others. To add to this inherent characteristic extenders or stringiness agents have been incorporated with very decided benefit resulting therefrom.

Several very serious oil leakage problems on slow moving gear sets such as vertical edger drives, screw-down drives, etc., encountered in steel plant operations have been successfully eliminated by usage of one of the extreme pressure greases. In remote instances, pinion sets of rolling mills have been provided satisfactory lubrication with a minimum of leakage by resorting to this type of product.

Technological advances both in the art of compounding and in the evaluation of greases has made possible the development of several rather unique greases which

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will undoubtedly have a profound effect on the steel industry while stimulating still further progress on the part of the oil industry. It is believed personally that the former is contingent to a large extent on the latter.

Mechanical stability of greases and their resistance to bleeding is of prime importance in present day lubricant application due to the rather extensive usage of semi-automatic and automatic lubricating systems. Where oil separation takes place, considerable difficulty is encountered with leakage past the pistons, uneven and erratic feeding of the lubricant in the grease reservoir takes place, and in extreme cases complete stoppage of the entire system by blocking off the protective screen located at the base of the reservoir. Laboratory tests, while quite essential as a means of weeding out, should not be considered as a criterion but rather should be supplemented with actual field tests so that proper correlation will then offer a means for correcting the known variables. All too often the direct opposite from that indicated by the laboratory test is experienced during the field test.

It is well understood that small soap lumps, resulting from incomplete saponification, are virtually impossible to remove by any known method of screening while the grease is still in a semi-hot state. However, the grease maker should also appreciate the consumers' problem wherein these soap lumps tend to concentrate at the point of maximum shear in the various grease dispensing equipment causing complete stoppage in the flow of the lubricant thereby necessitating complete disassembly of the equipment in order to render it in an operative state. On automatic system installations, the bearings are jeopardized during the ensuing period. Homogenization has for the greater part been the most effective means of eliminating this problem.

Further study of the wetability characteristics of the various types of greases in contact with the several types of bearing materials would assist in determining their respective lubricating and adhesive qualities. The tendency on the part of some greases to break very sharply at a point near their dropping point make them suitable for certain specific applications. On the other hand, greases which tend to soften gradually fit into still another category. This type of phenomenon, if properly understood, would go far in eliminating the several problems noted in the field. Developments involving oxidation inhibition and anti-rust inhibition in the formulation of greases has offered several known benefits to date, one of which permits the bearing manufacturer to pre-load the bearing with a lubricating grease in advance of the shipment to the trade. One of the most common complaints offered by the consumer is that covering inconsistency of the grease from batch to batch as received. Minor changes in either procedure or composition may have a marked effect on the product produced. It is hoped that the study of the various phases of these complex structures will yield a means for ascertaining why these changes take place. While but a psychological problem in most cases, a change in the appearance

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or color of a grease tends to introduce a doubt in the minds of the consumers as to the quality and should, as such, be given due consideration.

Lime base lubricants are generally not employed for high temperature applications over 200° F. In special cases such as in the lubrication of roller hearth or normalizing roll bearings, general purpose lime base greases have been employed on a fairly frequent application cycle as a means of purging the bearings thereby preventing any build-up of deterioration products. Soda soap greases used heretofore had a tendency to decompose in the bearing ultimately causing damage to the bearing and mating shaft; hence, the usage of the lime base grease on a frequent application cycle. Some more recent tests wherein the lead soap and carbon dispersions have been employed indicate satisfactory results can be expected in the future on this application. Similar results have also been noted on bearings located at the soaking pits where temperature is an important factor. The excellent water repellant characteristics of this grease permit its extended usage wherever the economics involved will allow. Greases incorporating calcium acetate and lead soaps plus high melting point waxes have been generally accepted for several applications where both high temperatures and water repellancy are encountered. This type of development is a definite challenge to the prior temperature limitations of the conventional lime soap grease.

Properly compounded sodium base greases incorporating heavy bodied oils have provided a means for overcoming excess puddling or slumping of the grease in so-called semi-hot spots. Inclusion of selective fatty acids have enabled the grease maker to produce a product of this type with a much higher dropping point thereby extending its field of application. Mechanical milling of this grease has offered a product of smoother texture which assists in ease of handling. However, subsequent check of bearings lubricated with the milled product after several hours of operation showed a tendency on the part of the grease to return to its original condition. This then offers some question as to the relative merits of the initial milling operation.

Barium soap greases have been subjected to several field applications with both favorable and unfavorable results being noted to date. Where employed as the lubricant for electric motor bearings on run-out tables and annealing furnace fans subjected to fairly high temperature, the results were excellent. On the other hand, when subjected to the same type service operation at moderately low temperatures the results were not favorable. It appeared in the latter case that no bleeding of the oil from the soap was responsible for the lack of lubrication noted. This work is to be continued for more thorough and better evaluation of the limitations of this type of product.

Mixed base greases are still the preferred type general purpose ball bearing lubricant; consequently, predominating in the lubrication of electric motor bearings subjected to normal operating conditions. The subject of electric motor bearing lubrication is a specific study within itself. Over lubrication of the bearings is probably the most adverse condition noted with excess bearing temperatures and damaged seals resulting from this practice. Except in remote instances, replenishment of the lubricant on a quarterly basis with a predetermined amount will suffice. Sufficient time should be allowed for the new grease to completely expand before replacing the bottom plug.

Block type greases are employed for lubrication of the plain bearings on bar mills, blooming mills, hot strip mills, etc. where plain bronze and babbitt bearings are still in effect. These greases are generally of the lime or lime tallow type with or without graphite as a filler having unworked penetrations ranging from 35-125. The oil used in their composition is in most cases a residual product of fairly heavy viscosity. Packaging of this type of product in convenient sized burlap bags has offered the mill operator a means for sealing out scale from the roll bearings in the proximity of the scale breaker. The better retention properties offered by the burlap shrouding eliminates

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the tendency for the grease to ball up and work out of the bearing area while allowing the grease to bleed through the openings as required for lubrication purposes. Grease moulded to shape is also used in the lubrication of steam locomotive journals being applied to the journal by means of a spring loaded follower plate or false cellar.

Sheet mill operations of the hand mill variety still demand the manufacture of special greases in which no soaps are employed as thickening agents. The solid effect being made possible by the inclusion of mineral fillers. Hot neck and mixing greases are essentially heavy asphalts with soapstone lime or similar material added to affect a high melting point demanded by this type of mill lubrication practice. The grease in turn is recovered, reboiled, and sweetened with mixing grease as required.

Specialty products have also been used through the years wherein additions of horsehair, wool waste, wool yarn, etc. are employed as pads to spread the lubricant or as wicks to regulate the consumption. Care must be exercised to prevent these mixtures from packing down too hard and thereby interfering with proper lubrication. Sufficient horsehair is added to maintain the lubricant in an open state for extended periods. Hand raking of the wool yarn during routine inspection periods is sufficient to permit the capillary action, necessary for proper lubrication, to take place. Failure to carry out this procedure generally results in the wool yarn becoming glazed on the surface contacting the journal with poor lubrication and damage to the bearing as the end result.

In conclusion, it might be stated that despite the fact that considerable progress has been made regarding the study of complex reactions surrounding the manufacture of grease, there are still a considerable number of questions yet to be answered as to the how and why factors involved therein. Close cooperation on the part of the laboratory technician, grease maker, and consumer will undoubtedly provide many answers to these all-important questions in the not too distant future. It is gratifying to note the extensive research programs being conducted in this regard by most of the lubricant suppliers.

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"Technical Committee Column"

- NEEDLESS DUPLICATION OF EFFORT MINIMIZED . . .
- COMMERCIAL SPECIFICATIONS FOR AIRCRAFT GREASES . . .
- TECHNICAL COMMITTEE SESSION AT ANNUAL MEETING . . .

In the previous three issues of this column, a quick review was given of the scope of activities and organization of the various committees which have a direct connection with our Technical Committee. There are a number of other groups also actively investigating lubricating greases. Inspection of the memberships of those committees will disclose names which are familiar to us as members of the N. L. G. I. Technical Committee. In other words, there is a healthy overlapping of membership so that each group can be kept informed of the projects undertaken by other groups and *needless duplication of effort* can be *minimized.*

We have received a number of questions regarding the work done by the Aircraft Bearings and Lubricants Committee S-5c of the SAE Aeronautic Division. This group has been meeting regularly on the West Coast since February 19, 1946. Organized November 16, 1945, at the request of the aircraft industry, this committee, led by Mr. D. H. Moreton of Douglas Aircraft Corporation, has held eight meetings to date. Composed entirely of representatives of the grease and lubricant manufacturers, the committee is endeavoring to select grease and lubricant testing methods which correlate with the service experience of the airframe manufacturers and airline operators. The ultimate goal is to develop *commercial specifications for aircraft greases* giving a satisfactory life in most control bearings of 10,000 to 20,000 flight hours and commercial specifications for aircraft gear box oils having a satisfactory service life of at least 1,000 to 2,000 flight hours.

Primarily concerned at present with the evaluation of greases for commercial aircraft use, the methods being studied cover:

Storage Stability, Service Stability, Temperature Performance, Load Support and Wear (actuator jack-screws and landing gear, and other highly loaded plain bearings), Water Compatability, Rust Prevention, Contamination (dirt count).

This group has made steady progress in the selection of test methods, some existing and some new, which reflect

(Continued on page 18)

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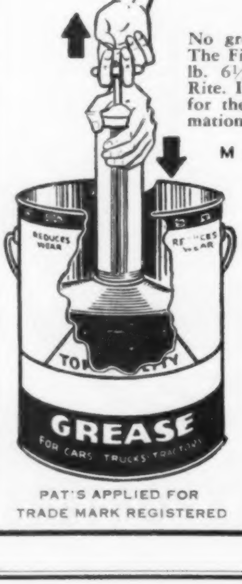

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President's Column . . .

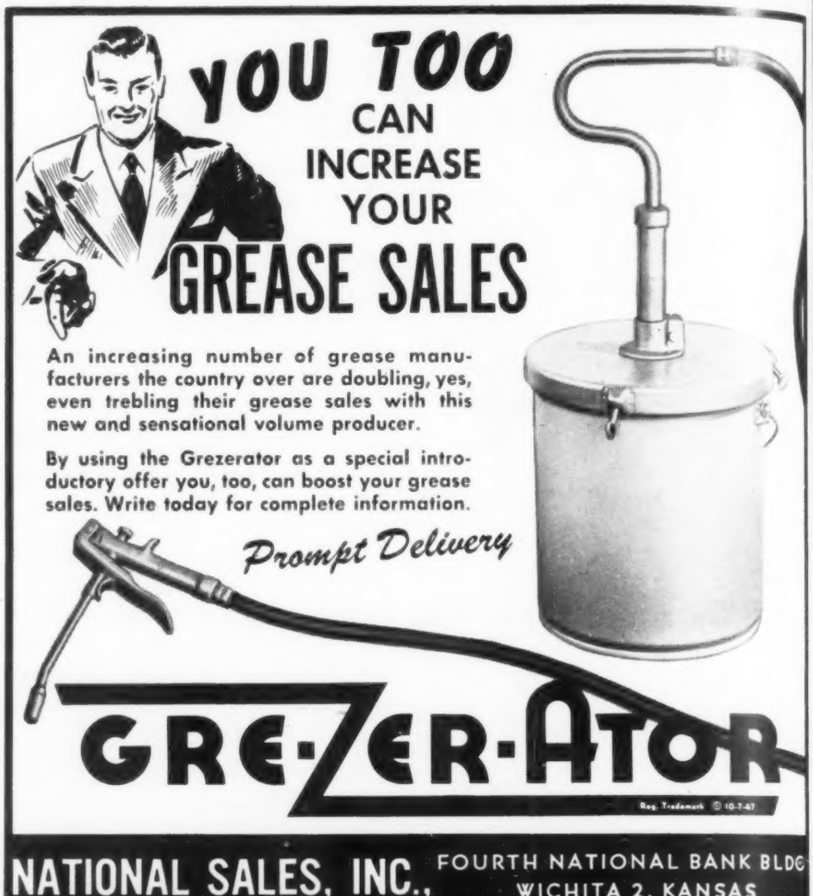
J. R. CORBETT

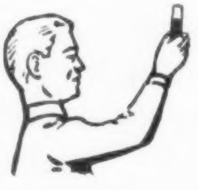
". . . a trying, difficult and exacting task."

By now you know that your Institute has a new Executive Secretary. I could have told you about him in the April issue of "The Spokesman" but it seemed a wiser course to wait and let you be the judge of this selection made by your Board. By now he has produced two issues of "The Spokesman" and had sufficient correspondence with members that some conclusion can be reached on the decision of the Board to appoint Harry F. Bennetts as your new Executive Secretary.

The selection of a new Executive Secretary was a trying, difficult and exacting task for your Board to perform. All of us are aware of the magnificent job performed by Carl E. Bolte, the previous Executive Secretary, who resigned to become Vice-President in Charge of Sales of the Battenfeld Grease and Oil Corporation, Kansas City, Missouri. To dis-

(Continued on page 16)





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PRESIDENT'S COLUMN . . .

(Continued from page 14)

cover someone who could carry on the work in the outstanding manner we have become accustomed to was no small task. The further responsibility of selecting a man who would properly represent each member posed another weighty problem the entire Board keenly realized. Mingled also with our problem was our universal regret over losing Mr. Bolte.

There were a number of applicants for the position, many of whom could be easily eliminated through the mail as obviously not possessing any of the desired qualifications so necessary and pertinent to our National Office. The eligible candidates were invited to attend the Board Meeting at their own expense. On Wednesday, March 31st, we met at the Blackstone Hotel, Chicago, Illinois, spending all of the day and part of the evening in making a selection we felt confident could adequately serve us. To say the least, a decision was difficult to reach; all applicants proved to be of the highest calibre and possessed a healthy background of previous organization experience. In fact, every applicant that appeared before us could have aptly filled the position. Actually, a decision was not reached until Mr. Bennetts was located getting on his train and ret ned to t Board for a second intervi In b his first and second intervi he p sented such a wealth of e erience practical organization mana ment a operation, we all were convin d that t position should be offered h . He n only was able to talk the bu ness in t terms of an experienced man; but he w also able to present actual tangible e dence in the form of printed nd mime graphed publications aptly demonstra ing his past experience and abilities.

As this column is being written no fication has just been received that M

(Continued on page 18)

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TECHNICAL COMMITTEE COLUMN

(Continued from page 12)

and measure significant service characteristics.

May we call attention to the fact that the *16th Annual Meeting* of the Institute will be held October 11th through October 13th, Edgewater Beach Hotel, Chicago, Illinois. The Technical Committee will have its session on October 13th. We shall have to start planning for the agenda very soon and, therefore, you are requested to send in any suggestions regarding subjects that should be presented to the Technical Committee at that time.

PRESIDENT'S COLUMN . . .

(Continued from page 16)

Bennetts has won the 1947 Award of Merit presented to him by Mr. W. Averill Harriman, Secretary of Commerce, at a banquet held in Washington, D. C., at noon April 26th. This award was given in recognition of the most valuable service that was rendered by any Trade Association Executive to his association and to the public during the year of 1947. His award is known as A. T. A. E. Distinguished Service Award for 1947. Unfortunately the Award does not go to our Institute, but will go to his previous affiliation, The Electric Association of Kansas City. It is with a feeling of some pardonable pride that I am able to report a hearty concurrence of opinion between your Board of Directors and Mr. W. Averill Harriman, Secretary of Commerce.

It is with no small feeling of relief I can also report to you that your National Office can be retained in Kansas City, its present centrally and strategically located position. It has now become increasingly evident to all of us that there has been no break in the continuity of the expert work to which we have all become thoroughly accustomed.

Looking forward into 1948 I can conceive of nothing hindering the Institute from scaling even greater accomplishments for our Industry. Much has already been accomplished and more will be accomplished in rendering service to our members. Our Institute has become outstanding, vigorous and wholesome because it is dedicated to the advancement of our Industry.

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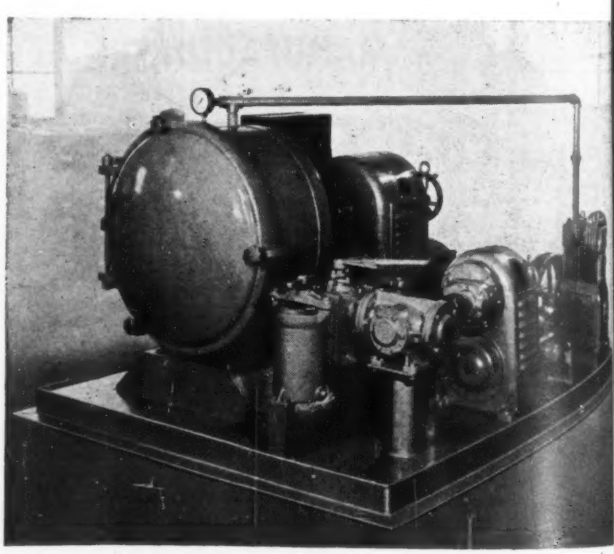

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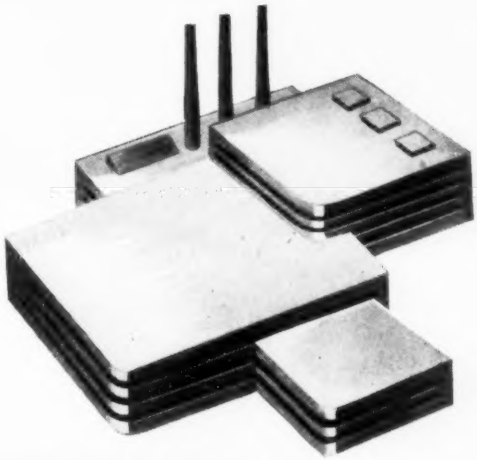

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